

Abstract

A scanning electron microscope with an energy filter which can positively utilize secondary electrons and/or reflected electrons which collide against a mesh electrode and are lost. The scanning electron microscope which has a porous electrode for producing an electric field for energy-filtering electrons produced by applying a primary electron beam to a sample and a 1st electron detector which detects electrons passing through the porous electrode is characterized by further having a porous structure provided near the sample, a deflector which deflects electrons from the axis of the primary electron beam, and a 2nd electron detector which detects the electrons deflected by the deflector.